B.   REMARKS

The Examiner is thanked for the performance of a thorough search. In this Reply,

Claims 1 and 9 have been amended and new Claims 17-24 added. Hence, Claims 1-24

are pending in this application. The amendments to the claims and the new claims do not

add any new matter to this application. Furthermore, the amendments to the claims were

made to improve the readability and clarity of the claims and not for any reason related to

patentability. All issues raised in the Office Action mailed July 2, 2003 are addressed

hereinafter.

STATEMENT OF SUBSTANCE OF TELEPHONE INTERVIEW

An Interview Summary was mailed by the U.S. Patent and Trademark Office on

July 25, 2003. This Interview Summary documented a telephone conversation conducted

on July 16, 2003 between the Examiner and Sheila Severinghaus, a patent secretary

employed by the law firm of the attorney for the Applicant. The telephone conversation

included a discussion of a Preliminary Amendment filed on July 9, 2001 that was not

reflected in the Office Action mailed on July 2, 2003. The Preliminary Amendment

made only minor amendments to the "Cross Reference to Related Applications" section

of the present application to provide the application serial numbers for two related patent

applications. The Interview Summary acknowledged entry of the Preliminary

Amendment.

OBJECTION TO CLAIM 1

In the Office Action, Claim 1 was objected to on the ground that Claim 1 contains a typographical error in Line 8 in the form of a missing word "data," namely, that the phrase "making a copy of the targeted and modifying..." should read "making a copy of the targeted *data* and modifying..." (emphasis added). Claim 1 has been amended herein to address this issue. Accordingly, reconsideration and withdrawal of the objection to Claim 1 is respectfully requested.

REJECTION OF CLAIMS 1 AND 9 UNDER 35 U.S.C. § 102(e)

Claims 1 and 9 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Gorshkov et al.*, U.S. Patent No. 6,490,721 (hereinafter "*Gorshkov*"). It is respectfully submitted that Claims 1 and 9, as amended, are patentable over *Gorshkov* for at least the reasons provided hereinafter.

CLAIM 1

Claim 1, as amended, recites a method of debugging a first software program that requires:

> "preserving a memory state of a preserved portion of the first software program;
> dynamically linking a second software program to the first software program
>   without deallocating from volatile memory the first software program;
> executing the second software program; and   )
> if execution of the second software program would otherwise cause modification
>   to targeted data that is in the preserved portion of the first software
>   program, then making a copy of the targeted data and modifying the copy
>   of the targeted data to generate a modified copy of the targeted data
>   without modifying the targeted data that is in the preserved portion of the
>   first software program."

It is respectfully submitted that Claim 1 includes one or more limitations that are not taught or suggested by *Gorshkov*. For example, Claim 1 requires "if execution of the second software program would otherwise cause modification to targeted data that is in the preserved portion of the first software program, then making a copy of the targeted data and modifying the copy of the targeted data to generate a modified copy of the targeted data without modifying the targeted data that is in the preserved portion of the first software program."

It is understood from the Office Action that the parent process described in *Gorshkov* is considered to be the "first software program" recited in Claim 1 and that the child process is considered to be the "second software program" recited in Claim 1. *Gorshkov* describes that the parent process consists of the target program to be debugged and the debugging user actions needed from the user action libraries (Col. 3, lines 45-53). *Gorshkov* also describes that the child process is created using a fork process and is a copy of the parent process.

In operation, the child process attaches to the parent process and patches into the parent process, i.e., inserts, calls to user actions, i.e., debugging routines. More specifically, the child process inserts, into the memory image of the target program, calls to user actions contained in the user action library. The child process allocates space for the patch in a patch area in the parent process and replaces one or more instructions in the target program with a branch instruction to the patch area. The child process also generates code in the patch area to call the user action, i.e., the debugging routine (Col. 4, lines 1-38). When the modified image of the target program is executed, it calls the debugging routines contained in the user action library.

Claim 1 requires that in the situation where "execution of the second software program would otherwise cause modification to targeted data that is in the preserved portion of the first software program," that the targeted data not be modified and the copy of the targeted data is modified. Given the assertion in the Office Action that the "copy of the targeted data" recited in Claim 1 is a portion of the parent process duplicated in the child process, then the Claim 1 limitation of "modifying the copy of the targeted data to generate a modified copy of the targeted data" is not taught or suggested by *Gorshkov*, since *Gorshkov* does not teach or suggest modifying the child process. Furthermore, the Claim 1 limitation of modifying the copy of the targeted data "without modifying the targeted data that is in the preserved portion of the first software program" is also not taught or suggested by *Gorshkov*, since the parent process is modified when the child process patches the debugging routines into the parent process.

In view of the foregoing, it is therefore respectfully submitted that Claim 1 includes one or more limitations that are not taught or suggested by *Gorshkov* and is therefore patentable over *Gorshkov*. Claim 9 recites limitations similar to Claim 1, except in the context of a computer-readable medium. It is therefore respectfully submitted that Claim 9 is patentable over *Gorshkov* for at least the reasons set forth herein with respect to Claim 1. Accordingly, reconsideration and withdrawal of the rejection of Claims 1 and 9 under 35 U.S.C. § 102(e) as being anticipated by *Gorshkov* is respectfully requested.

REJECTION OF CLAIMS 2, 5-8, 10 AND 13-16 UNDER 35 U.S.C. § 103(a)

Claims 2, 5-8, 10 and 13-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gorshkov* in view of *Martin et al.*, U.S. Patent No. 6,029,178

(hereinafter "*Martin*") and further in view of *Nixon et al.*, US Pub No. 2003/0004952 (hereinafter "*Nixon*"). It is respectfully submitted that Claims 2, 5-8, 10 and 13-16 are patentable over *Gorshkov*, *Martin* and *Nixon*, alone or in combination, for at least the reasons provided hereinafter.

Claims 2 and 5-8 depend from Claim 1 and include all of the limitations of Claim 1. As previously set forth herein, Claim 1 includes several limitations that are not taught or suggested by *Gorshkov*. *Martin* and *Nixon* were not relied upon for these limitations and it is also respectfully submitted that these limitations are also not taught or suggested by *Martin* or *Nixon*. For example, *Martin* describes a system and method for providing consistency of replicated data in a distributed enterprise computing system. *Nixon* describes a distributed configuration database architecture that optimizes available communications links. It is respectfully submitted that neither reference is related to debugging software programs or teaches or suggests the limitation of "if execution of the second software program would otherwise cause modification to targeted data that is in the preserved portion of the first software program, then making a copy of the targeted data and modifying the copy of the targeted data to generate a modified copy of the targeted data without modifying the targeted data that is in the preserved portion of the first software program," required by Claims 2 and 5-8. It is therefore respectfully submitted that Claims 2 and 5-8 contain at least one limitation that is not taught or suggested by *Gorshkov*, *Martin* and *Nixon*, alone or in combination, and are therefore patentable over these references.

Claims 10 and 13-16 recite limitations similar to Claims 2 and 5-8, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 10

and 13-16 are patentable over *Gorshkov, Martin* and *Nixon* for at least the reasons set forth herein with respect to Claims 2 and 5-8. In view of the foregoing, reconsideration and withdrawal of the rejection of Claims 2, 5-8, 10 and 13-16 under 35 U.S.C. § 103(a) as being unpatentable over *Gorshkov* in view of *Martin* and further in view of *Nixon* is respectfully requested.

REJECTION OF CLAIMS 3, 4, 11 and 12 UNDER 35 U.S.C. § 103(a)

Claims 3, 4, 11 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gorshkov* in view of *Martin*. It is respectfully submitted that Claims 3, 4, 11 and 12 are patentable over *Gorshkov* and *Martin*, alone or in combination, for at least the reasons provided hereinafter.

Claims 3 and 4 depend from Claim 1 and include all of the limitations of Claim 1. As previously set forth herein, Claim 1 includes several limitations that are not taught or suggested by *Gorshkov*. *Martin* was not relied upon for these limitations and it is also respectfully submitted that these limitations are also not taught or suggested by *Martin*. As previously described herein, *Martin* describes a system and method for providing consistency of replicated data in a distributed enterprise computing system. *Martin* is not related to debugging software programs and does not teach or suggest the limitation of "if execution of the second software program would otherwise cause modification to targeted data that is in the preserved portion of the first software program, then making a copy of the targeted data and modifying the copy of the targeted data to generate a modified copy of the targeted data without modifying the targeted data that is in the preserved portion of the first software program," required by Claims 3 and 4. It is therefore respectfully submitted that Claims 3 and 4 contain at least one limitation that is

not taught or suggested by *Gorshkov* and *Martin*, alone or in combination, and are therefore patentable over these references.

Claims 11 and 12 recite limitations similar to Claims 3 and 4, except in the context of computer-readable media. It is therefore respectfully submitted that Claims 11 and 12 are patentable over *Gorshkov* and *Martin* for at least the reasons set forth herein with respect to Claims 3 and 4. In view of the foregoing, reconsideration and withdrawal of the rejection of Claims 3, 4, 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over *Gorshkov* in view of *Martin* is respectfully requested.

NEW CLAIMS 17-24

New Claims 17-24 recite limitations similar to Claims 1-8, except in the context of apparatti. It is therefore respectfully submitted that Claims 17-24 are patentable over the cited art for at least the reasons set forth herein with respect to Claims 1-8.

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

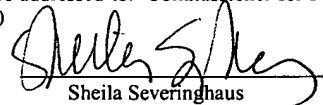Edward A. Becker
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